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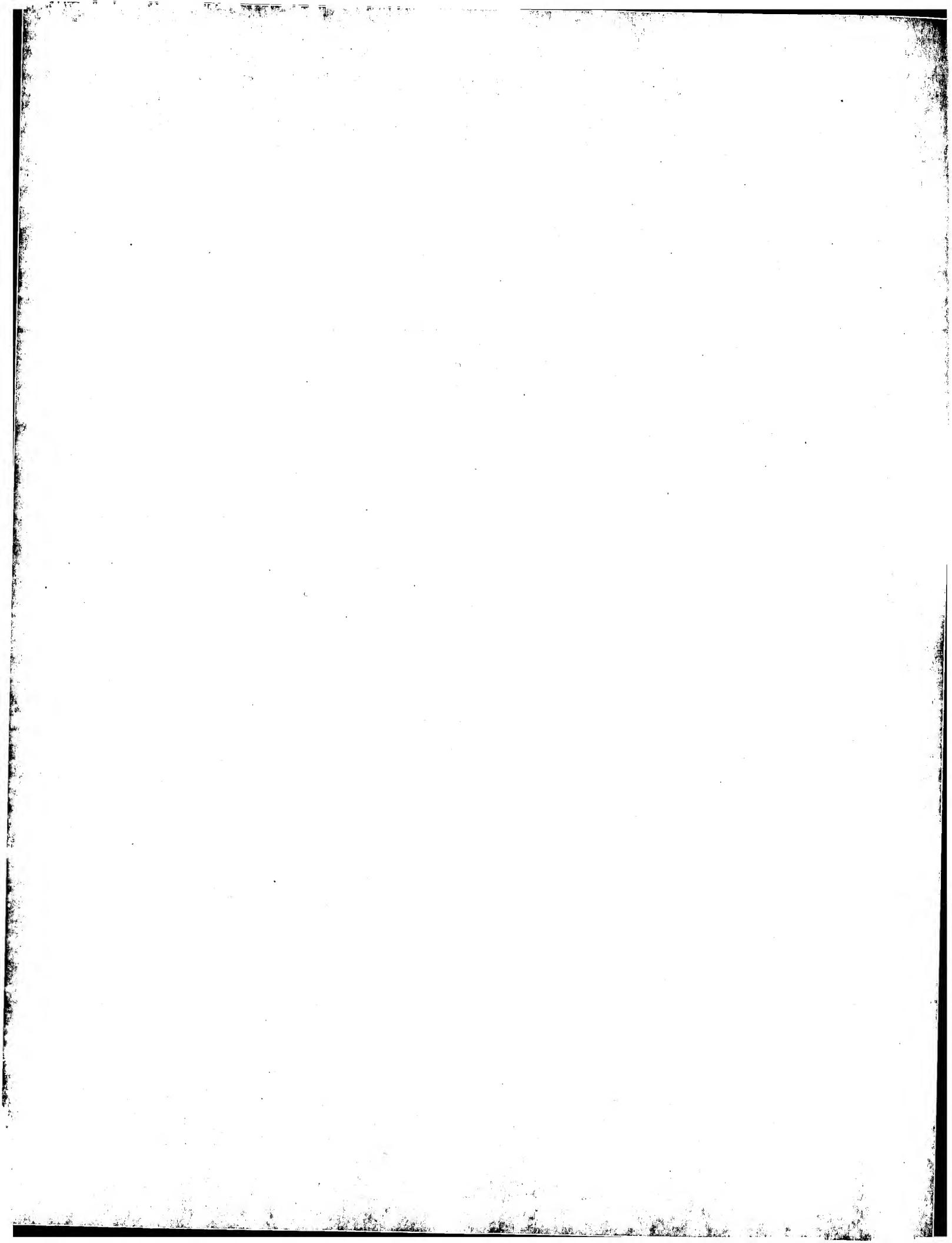
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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

*O I P E S C I E*  
FEB 19 2004  
PATENT & TRADEMARK OFFICE  
In re application of: Edward Houston Group No.: 1723  
Application No.: 10/662,553  
Filed: September 15, 2003 Examiner: Not Yet Assigned  
For: PSORIASIS TREATMENT AND METHOD OF PREPARATION

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

## TRANSMITTAL OF CERTIFIED COPIES

Attached please find the certified copy of the foreign application from which priority is claimed for this case:

Country: United Kingdom  
Application Number: GB 0217372.2  
Filing Date: July 25, 2002

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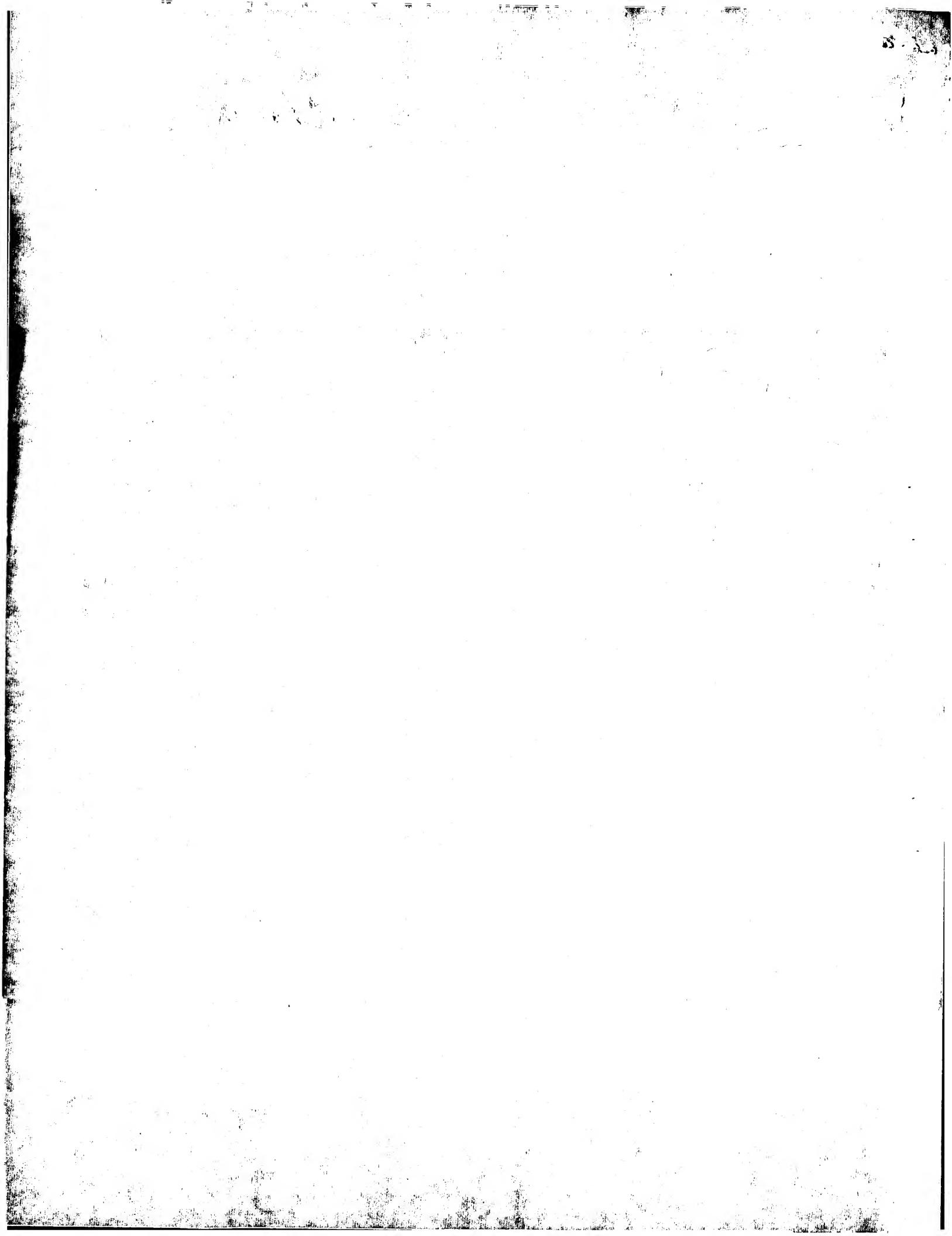
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INVESTOR IN PEOPLE

The Patent Office  
Concept House  
Cardiff Road  
Newport  
South Wales  
NP10 8QQ

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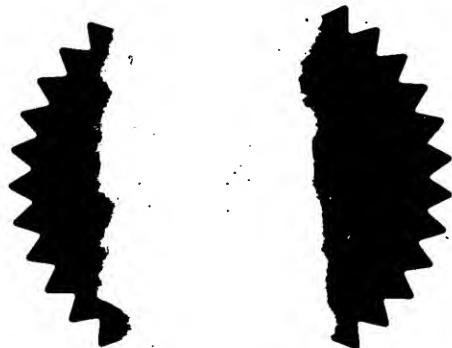
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29JUL02 E736476-1 D10002  
P01/7700 0.00-0217372.2

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(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form.)

1. Your reference

dor.2251.uk.cr.d

2. Patent application number

(The Patent Office will fill in this part)

0217372.2

3. Full name, address and postcode of the or of each applicant (including all surnames)

Edward Houston  
114 Main Street  
Condorrat  
Cumbernauld  
GLASGOW  
G67 4SY

Patents ADP number (if you know it)

8198525001

If the applicant is a corporate body, give the country/state of its incorporation

UK

4. Title of the invention

Psoriasis formulation and method of preparation

5. Name of your agent (if you have one)

Kennedys Patent Agency Limited

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

Floor 5, Queens House  
29 St Vincent Place  
GLASGOW  
G1 2DT

8088746001

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7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

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8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

Yes

- a) any applicant named in part 3 is not an inventor, or
- b) there is an inventor who is not named as an applicant, or
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Description

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Claim(s)

Abstract

Drawing(s)

1

10. If you are also filing any of the following, state how many against each item.

**Priority documents****Translations of priority documents****Statement of inventorship and right to grant of a patent (Patents Form 7/77)****Request for preliminary examination and search (Patents Form 9/77)****Request for substantive examination (Patents Form 10/77)****Any other documents (please specify)**

11.

I/We request the grant of a patent on the basis of this application

Signature

KENNEDYS

Date

25 July 2002

12. Name and daytime telephone number of person to contact in the United Kingdom

Claire Rutherford

0141 226 6826

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1 Psoriasis Formulation and Method of Preparation

2

3 This invention relates to formulations which can be used  
4 in the treatment of dermatological disorders, such as  
5 psoriasis. The current invention also relates to a  
6 method of preparation that is more acceptable for use  
7 than many current treatments.

8

9 The term dermatological disorders covers a wide range of  
10 disorders, such as psoriasis and eczema. These disorders  
11 affect a large number of people. Psoriasis is a chronic  
12 recurring skin disease, the scope of which can vary  
13 considerably from mild outbreaks, to severe cases.

14

15 The underlying problem of psoriasis is currently thought  
16 to be that new skin cells are produced too quickly, so  
17 that the old skin cells have not had time to die off and  
18 be removed. The resulting overproduction of skin cells  
19 is red and raised patches on the skin.

20

21 Various treatments have been suggested for psoriasis. In  
22 particular, many sufferers find that coal tar has a  
23 particularly beneficial effect and improves many of the

1 symptoms of psoriasis. Unfortunately, although coal tar  
2 has been found to be effective against the symptoms of  
3 psoriasis in many patients, as a substance coal tar is  
4 not the most user friendly. Coal tar has a very pungent  
5 smell and has a black colour which stains both clothing  
6 and bed linen. This can be very off-putting for many  
7 psoriasis sufferers and is generally inconvenient for  
8 regular use.

9

10 It can therefore be seen that it would be beneficial to  
11 provide a psoriasis treatment which contains coal tar,  
12 but which is formulated in a manner which is appropriate  
13 for regular use.

14

15 It is an object of the present invention to provide a  
16 psoriasis treatment which comprises coal tar.

17

18 A further object of the present invention is to provide a  
19 psoriasis treatment in a formulation which does not stain  
20 clothes and is not unpleasant smelling.

21

22 A yet further object of the present invention is to  
23 provide a psoriasis treatment in a formulation that can  
24 be easily applied.

25

26 According to a first aspect of the present invention,  
27 there is provided a method of preparing a psoriasis  
28 formulation comprising coal tar and zinc pyrithione,  
29 wherein the coal tar is filtered to remove impurities by  
30 filter compression.

31

32 Preferably the coal tar is filtered by being fed through  
33 a compressed charcoal filter.

- 1
- 2 Most preferably the coal tar is fed through the filter at
- 3 17 to 19 psi.
- 4
- 5 Most preferably the coal tar is fed through the filter at
- 6 18 psi..
- 7
- 8 Preferably compressed air is used to force the coal tar
- 9 through the filter.
- 10
- 11 Preferably the coal tar is left in the filter system for
- 12 8 hours.
- 13
- 14 Preferably the filtered fluid is boiled.
- 15
- 16 Most preferably the filtered fluid is boiled for 5
- 17 minutes.
- 18
- 19 Preferably the boiled, filtered fluid is allowed to cool
- 20 to room temperature.
- 21
- 22 Most preferably the top layer of the boiled, filtered
- 23 fluid is refiltered.
- 24
- 25 Optionally, refiltering is through a nylon mesh.
- 26
- 27 Preferably a surfactant is added to the formulation.
- 28
- 29 Preferably the surfactant is an ionic surfactant.
- 30
- 31 Most preferably the surfactant is sodium lauryl sulphate.
- 32
- 33 Preferably a carrier is added to the formulation.

1

2 Most preferably multiple carriers are added to the  
3 formulation.

4

5 Optionally a carrier may be isopropyl myristate.

6

7 A further option is that a carrier may be ethyl alcohol.

8

9 Preferably the psoriasis formulation is placed in a spray  
10 or aerosol container.

11

12 According to a second aspect of the present invention,  
13 there is provided a composition for the treatment of  
14 dermatological disorders, comprising:

15

16 (a) coal tar;  
17 (b) zinc pyrithione;  
18 (c) one or more surfactants; and  
19 (d) one or more carriers

20

21 Preferably the psoriasis formulation also contains  
22 allantoin.

23

24 Preferably the surfactant is an ionic surfactant.

25

26 Most preferably the surfactant is sodium lauryl sulphate.

27

28 Optionally a carrier may be isopropyl myristate.

29

30 A further option is that a carrier may be ethyl alcohol.

31

32 Preferably the psoriasis formulation will also comprise  
33 an anti-fungal agent.

1

2 Preferably the anti-fungal agent is undecylenic acid.

3

4 Preferably the psoriasis treatment formulation comprises  
5 the following ingredients:

6

7 zinc pyrithione;  
8 alcoholic extract of coal tar;  
9 allantoin;  
10 sodium lauryl sulphate;  
11 isopropyl myristate;  
12 ethyl alcohol; and  
13 undecylenic acid

14

15 Preferably the psoriasis formulation comprises the  
16 following ingredients in the following amounts:

17

18 zinc pyrithione	0.20%
19 alcoholic extract of coal tar	0.25%
20 allantoin	0.25%
21 sodium lauryl sulphate	0.10%
22 isopropyl myristate	49.45%
23 ethyl alcohol	49.45%
24 undecylenic acid	0.30%

25

26 Preferably the psoriasis formulation is provided in a  
27 spray form.

28

29 Alternatively, the psoriasis formulation is provided in  
30 an aerosol form.

31

1 In order to provide a better understanding of the present  
2 invention, embodiments will now be described by way of  
3 example only, and with reference to the following Figure:  
4

5 Figure 1 shows a charcoal filter system for use according  
6 to the first aspect of the present invention.  
7

8 Coal tar, when untreated, has a very pungent smell and is  
9 black in colour. The black colouring will stain clothing  
10 and bed linen on contact.  
11

12 In order to produce an acceptable formulation for use in  
13 treating psoriasis or other dermatological disorders,  
14 coal tar is filtered in order to eradicate the smell and  
15 remove many of the impurities which result in staining.  
16

17 In the preferred embodiment, crude coal tar is mixed with  
18 2%sd alcohol (which acts as a thinner and is poured into  
19 a charcoal filter system 1 via the coal tar input 2.  
20 Clean, compressed air is then applied via the air input 3  
21 at 18 psi (which can be varied between 17 to 19 psi).  
22

23 The charcoal filter system 1 comprises a fine mesh gauze  
24 filter 4 and a charcoal filter 5 which the coal tar  
25 mixture is pushed through into the catch tank 6. It is  
26 worth noting that too much pressure forces charcoal  
27 through the system and too little does not push the coal  
28 tar mixture through.  
29

30 The system 1 is left in place overnight with the  
31 compressed air still in place. In the preferred  
32 embodiment, the system is left for approximately 8 hours.  
33 The filtered fluid is then taken from the catch tank 6

1 via the exit flow tap 7 and is boiled (in the preferred  
2 embodiment it is boiled for 5 minutes) and left to  
3 completely cool to room temperature. The fluid now has a  
4 scum on top which is filtered through a nylon mesh to  
5 give a clear, completely odourless liquid which does not  
6 stain materials.

7

8 A surfactant and a carrier is then added to make the  
9 formulation completely soluble. In the preferred  
10 embodiment, the surfactant is an ionic surfactant, sodium  
11 lauryl sulphate. Multiple carriers are used, and in the  
12 preferred embodiment, these are isopropyl myristate and  
13 ethyl alcohol. Zinc pyrithione is also added to the  
14 formulation, which increases the effectiveness of the  
15 formulation to a previously unexpected degree. Allantoin  
16 is also added to the formulation.

17

18 In the preferred embodiment, an anti-fungal agent is also  
19 added to the formulation. This anti-fungal agent is  
20 undecylenic acid in the preferred embodiment.



71

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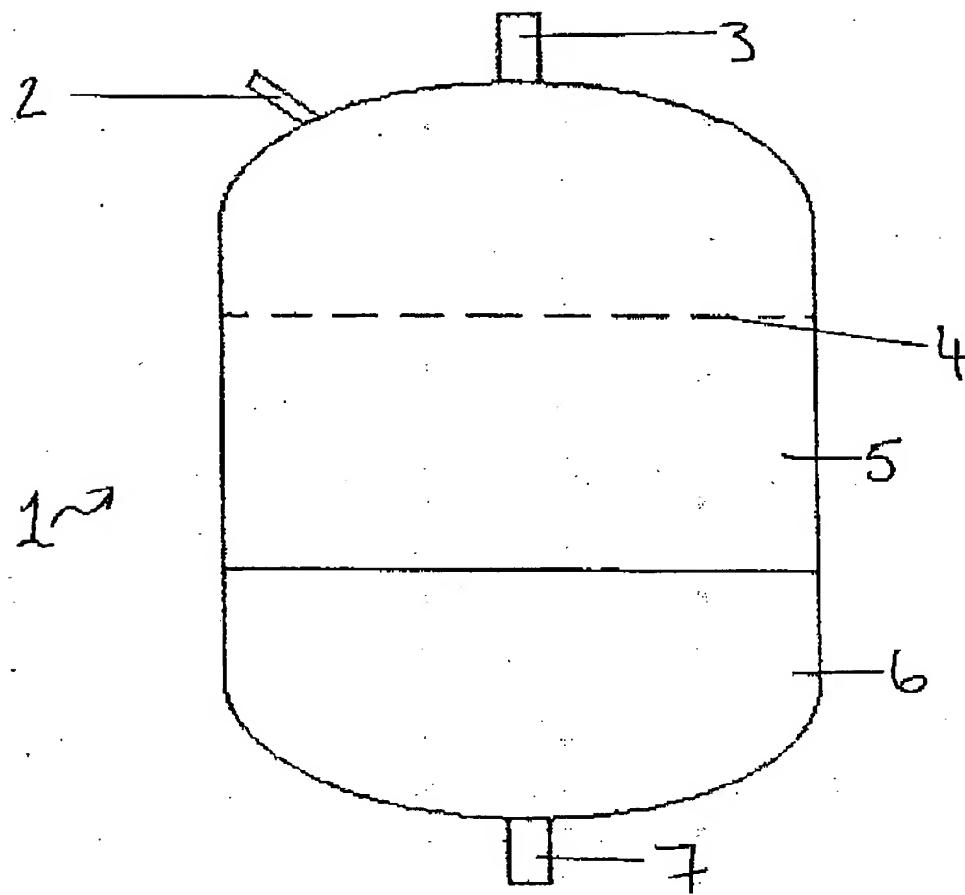


Figure 1

